

Application Number 10/521531
Response to the Office Action dated July 28, 2008

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Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for deuteration of ~~a compound having an~~ aromatic ring whose ring atoms consist of carbon atoms and which may have at least one substituent, which comprises reacting ~~the compound having the aromatic ring under a~~ neutral condition with heavy hydrogen source in the presence of at least one an activated catalyst selected from a platinum catalyst, a rhodium catalyst, a ruthenium catalyst, a nickel catalyst and a cobalt catalyst, wherein the at least one activated catalyst is activated with hydrogen gas or heavy hydrogen gas.
2. (Original) The method for deuteration according to claim 1, wherein the catalyst is an activated platinum catalyst.
3. (Original) The method for deuteration according to claim 2, wherein the platinum catalyst is one comprising platinum of 0 to 2 valences.
4. (Original) The method for deuteration according to claim 2, wherein the platinum catalyst is platinum carbon.
5. (Previously Amended) The method for deuteration according to claim 1, wherein the aromatic ring is one selected from a group consisting of benzene, naphthalene, anthracene, phenanthrene, 9,10-dihydroanthracene, naphthacene, pentaphene, pentacene, hexaphene, hexacene, heptaphene, heptacene, trinaphthylene, 1,4-dihydronaphthalene, pyrene, triphenylene, biphenylene, indene, indan, indacene, phenalene, fluorene, acenaphthene, acenaphthylene, fluoranthene, tetraphenylene, coranthrene,

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acephenanthrylene, aceanthrylene, cyclopentaphenanthrene, chrysene, picene, pleiadene, rubicene, pyranthrene, coronene, perylene, rubrene, dibenzophenanthrene, 1,2-dibenzo-1,3-cycloheptadiene and ovalene.

6. (Cancelled)

7. (New) The method for deuteration according to claim 1, wherein the at least one substituent of the aromatic ring whose ring atoms consist of carbon atoms and which may have at least one substituent is selected from the group consisting of a halogen atom, a hydroxyl group, a mercapto group, an oxo group, a thioxo group, a carboxyl group, a sulfo group, a sulfino group, a sulfeno group, a phosphino group, a phosphinoyl group, a formyl group, an amino group, a cyano group and a nitro group.

8. (New) The method for deuteration according to claim 1, wherein the at least one substituent of the aromatic ring whose ring atoms consist of carbon atoms and which may have at least one substituent is selected from the group consisting of an alkyl group, an alkenyl group, an aryl group, an aralkyl group, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an alkylsulfonyl group, an arylsulfonyl group, an alkylsulfinyl group, an arylsulfinyl group, an alkylphosphino group, an arylphosphino group, an alkylphosphinoyl group, an arylphosphinoyl group, an alkylamino group, an arylamino group, an alkoxycarbonyl group, an aryloxycarbonyl group, an alkoxysulfonyl group, an aryloxysulfonyl group, an acyl group and an acyloxy group, which may further have at least one substituent.

9. (New) The method for deuteration according to claim 8, wherein the at least one substituent of the at least one substituent of the aromatic ring whose ring atoms consist of carbon atoms and which may have at least one substituent selected from the group consisting of an alkyl group, an alkenyl group, an aryl group, an aralkyl group, an alkoxy group, an aryloxy group, an alkylthio group, an arylthio group, an alkylsulfonyl group, an arylsulfonyl group, an alkylsulfinyl group, an arylsulfinyl group, an alkylphosphino group, an arylphosphino group, an alkylphosphinoyl group, an arylphosphinoyl group, an alkylamino group, an arylamino group, an alkoxycarbonyl group, an aryloxycarbonyl group, an alkoxysulfonyl group, an aryloxysulfonyl group, an acyl group and an acyloxy group, which may further have at least one substituent.

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group, an arylphosphino group, an alkylphosphinoyl group, an arylphosphinoyl group, an alkylamino group, an arylamino group, an alkoxycarbonyl group, an aryloxycarbonyl group, an alkoxysulfonyl group, an aryloxysulfonyl group, an acyl group and an acyloxy group, which may further have at least one substituent, is selected from the group consisting of an alkyl group, an alkenyl group, an alkynyl group, an aryl group, a hydroxy group, an alkoxy group, an amino group, an alkylamino group, a mercapto group, an alkylthio group, an formyl group, an acyl group, a carboxyl group, an alkoxycarbonyl group, a carbamoyl group and an alkylcarbamoyl group.

10. (New) The method for deuteration according to claim 1, wherein the reaction is carried out at 180 °C or lower.